WHAT IS CLAIMED IS:

1. A method of producing a denuded zone in a semiconductor wafer in a housing having a source of heat, a susceptor, a wafer support and a Bernoulli wand, said method including:

heating a semiconductor wafer with opposite major surfaces in a housing to an elevated temperature of at least about 1175°C with a heat source, said semiconductor being supported by a support in the housing during said heating;

ceasing said heating and moving said semiconductor out of conductive heat transfer relation with the support with the Bernoulli wand; and

cooling said heated wafer in the housing while holding said wafer out of conductive heat transfer relationship with the support at a rate of at least 10°C/sec until the wafer reaches a temperature of less than about 850°C thereby forming a denuded zone in the wafer.

2. A method as set forth in claim 1 including placing the wafer in a chamber and applying an epitaxial coating to at least one said major surface thereof with said wafer being in immediate heat transfer relation with the support during at least a portion of the coating application;

3.A method as set forth in claim 3 wherein said wafer is heated to a temperature of at least about 1250°C after said coating is applied and the cooling rate of the wafer is at least about 20°C/sec.

4. A method as set forth in claim 2 wherein said wafer is cooled at a rate of at least about 15°C/sec.

5. A method as set forth in claim 2 wherein said wafer is cooled at a rate of at least about 20°C/sec.

6. A method as set forth in claim 2 wherein said wafer is cooled at a rate of at least about 50°C/sec.

7. A method as set forth in claim 4 wherein said cooling rate is at least about 15°C/sec until the temperature of the wafer is reduced at least about 325°C.

8. A method as set forth in claim 5 wherein said cooling rate is at least about 20°C/sec until the temperature of the wafer is reduced at least about 325°C.

9. A method as set forth in claim 6 wherein said cooling rate is at least about 50°C/sec until the temperature of the wafer is reduced at least about 325°C.

10. A method as set forth in claim 4 wherein said cooling rate is at least about 15°C/sec until the temperature of the wafer is reduced at least about 400°C.

11. A method as set forth in claim 5 wherein said cooling rate is at least about 20°C/sec until the temperature of the wafer is reduced at least about 400°C.

12. A method as set forth in claim 6 wherein said cooling rate is at least about 50°C/sec until the temperature of the wafer is reduced at least about 400°C.

13. A method as set forth in claim 4 wherein said cooling rate is at least about 15°C/sec until the temperature of the wafer is reduced at least about 450°C.

14. A method as set forth in claim 5 wherein said cooling rate is at least about 20°C/sec until the temperature of the wafer is reduced at least about 450°C.

15. A method as set forth in claim 6 wherein said cooling rate is at least about 50°C/sec until the temperature of the wafer is reduced at least about 450°C.

16. A method as set forth in claim 1 wherein said heat source is light.

17. A method as set forth in claim 16 wherein said heat source is a halogen lamp.

18. An apparatus for processing semiconductor wafers to form a denuded zone in the wafer, said apparatus comprising:

a housing defining a chamber and having a door selectively movable between an open position and a closed position;

a heat source operably associated with the chamber;

a support in the chamber for selectively supporting a wafer in the chamber;

inlet means communicating with the chamber for selectively permitting introduction of a fluid into the chamber;

a Bernoulli wand mechanism with a wand head movably mounted in the chamber and operable for moving the wafer to a position out of conductive heat transfer relationship with the support during cooling of the wafer to form a denuded zone; and

control means operably connected to the Bernoulli wand mechanism for controlling movement of the wand head between a wafer pick up position and wafer cooling position and being operable to maintain said wafer at the cooling position for a predetermined cooling period.

19. An apparatus as set forth in claim 18 wherein the door is operable for selectively sealing said chamber interior from an exterior of the chamber to maintain a pressure differential between the exterior and the chamber interior.

20. An apparatus as set forth in claim 19 wherein the support includes a susceptor positioned to be in immediate heat transfer relation with a wafer during heating of a wafer.